NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
JOB HAZARD ANALYSIS

FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**James D. Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Ocean Carrying Capacity**	SUPERVISOR:	**Jack Helle**	FREQUENCY:	**8 hrs/day, 1 to 3 months/yr**
JOB TITLE:	**Research Biologist**	APPROVED BY:		JHA NUMBER:	**JF-9**
TASK:	**JF-9**	JOB PERFORMED BY:	**Noel Weemes, John Pohl**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Chemical-resistant gloves; safety glasses; fume hood; if formalin concentrations are above NIOSH REL (0.016 ppm), wear full-face, self-contained breathing apparatus (SCBA) with positive pressure; and isopropyl alcohol respirator requirements

GENERAL NOTES: Fish that are to be processed may be preserved with ice, formalin, or isopropyl alcohol. Fish are measured, weighed, dissected, and placed in various containers for future analysis and testing. Some fish come from archived samples that are up to 40 years old. These samples typically arrive in large glass jars with metal lids that are very difficult to remove. Some of the archived samples arrive preserved in isopropyl alcohol, with the inner tissues preserved in formalin.

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Measure the fish on a measuring board and scale and preserve the fish with formalin or isopropyl alcohol.	Exposure to toxic fumes and chemicals	Work under a fume hood and wear safety glasses and chemical-resistant gloves.
2	Dissect the fish with a sharp knife, scalpel, and dissecting tweezers; place tissue samples in plastic bags and test tubes; and place on ice.	Exposure to toxic fumes and chemicals	Work under a fume hood and wear safety glasses and chemical-resistant gloves.

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JOB HAZARD ANALYSIS

FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**James D. Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Marine Salmon Interactions**	SUPERVISOR:	**Bill Heard**	FREQUENCY:	**34/trip**
JOB TITLE:	**Zoologist**	APPROVED BY:		JHA NUMBER:	**JF-10**
TASK:	**JF-10**	JOB PERFORMED BY:	**Pat Harris**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Waders, use jackknife to obtain mussels, ear muffs/radio, CO2 inflatable PFD (vest)
GENERAL NOTES: Mussel sampling at the Gulf of Alaska Prince William Sound

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Travel by air.	Mechanical equipment failure	Have the aircraft double-checked for mechanical failures.
1		High rate of take offs and landings per trip (34 samples collected)	The pilot should be well rested and alert; if necessary, take breaks. Prepare adequate flight plans.
1		Falling in shallow water	Improve landing sites and preselect a pilot.
1		Submerging plane in water	Take a safety training course in Anchorage (3D training- How to Get Out of a Submerged Plane [recommended]).
1		Falling into ocean	Improve landing sites and preselect a pilot.
2	Collect mussel samples.	Slip/fall on the cobbled mossy rocks	Test your footing before stepping and wear proper personal protective equipment in case of a fall.
2		Hypothermia	Emergency equipment should include the following: blankets, safety floatation devices, and a cellular telephone or radio.

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JOB HAZARD ANALYSIS

FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**James D. Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Habitat**	SUPERVISOR:	**Jeep Rice**	FREQUENCY:	**4h/day**
JOB TITLE:	**Research Biologist**	APPROVED BY:		JHA NUMBER:	**JF-11**
TASK:	**JF-11**	JOB PERFORMED BY:	**Adam Moles**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Boots and various types of gloves (latex, neoprene, and nonskid)
GENERAL NOTES: Study toxic effects of oil on species: pink salmon, herring, flat fish

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Set up tanks near a water source flow.	Lack of space	Move hoses to the ceiling.
1		Trip hazard created by fish slime and overflow tanks	Relocate overflow tanks out of aisles.
1		Slip	Waterproof your boots and take boots off when outside of the area so that water will not be tracked onto the dry floor.
1		Electrocution	Keep wiring off of the floor.
1		Domestic water in hose and grate deterioration	Replace as these items become deteriorated.
1		Chemicals stored where available	Store chemicals in a chemical cabinet.
1		Trip hazard created by the hose	Wind up the hose, unless it is in use.

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JOB HAZARD ANALYSIS

FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**Jim Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Habitat**	SUPERVISOR:	**Jeep Rice**	FREQUENCY:	**4-8 hrs/day**
JOB TITLE:	**Biolab Work**	APPROVED BY:		JHA NUMBER:	**JF-12**
TASK:	**JF-12**	JOB PERFORMED BY:	**Mandy Lindeberg**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: None
GENERAL NOTES: Research biologist

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Perform dissection.	Leaving samples out; chemical preservatives exposure	Perform work in a fume hood or a ventilated work box. Face velocity should be at least 100 linear feet per minute. This may be achieved by moving the oven out of the hood.
2	Bake samples in an oven (Room 119).	Chemical-toxic; lack of container labeling	Use appropriate container labels.
2		Chemical-toxic; chemicals stored in hood	Obtain and use a proper chemical storage cabinet.
3	Perform microscopy.	Muscle strain; difficulty looking into the scope	Adjust the work station for comfortable work, and try it for 2 weeks.
3		Carpal tunnel syndrome	Adjust the work station for comfortable work, and try it for 2 weeks.
3		Eye stress	Adjust the work station for comfortable work, and try it for 2 weeks.
3		Back problems	Adjust the work station for comfortable work, and try it for 2 weeks.

* = Recommended

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JOB HAZARD ANALYSIS

FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**James D. Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Ground Fish Assessment and Marine Salmon Interactions**	SUPERVISOR:	**Bill Heard and Phil Rigby**	FREQUENCY:	**8-14 hrs/day, 1-40 days/year**
JOB TITLE:	**Small Boat Operations**	APPROVED BY:		JHA NUMBER:	**JF-13**
TASK:	**JF-13**	JOB PERFORMED BY:	**Brad Weinlaeder and Chris Lundsford**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Floatation vests or jackets, hard hats, slip- and water- resistant boots, hip or chest waders, safety glasses, sunglasses, sunscreen, cold weather and rain gear, ear plugs or muffs, and survival suit
GENERAL NOTES: Location: Sea, Pier

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Perform general small boat maintenance.	Equipment or machinery not properly maintained	Maintain and inspect boats on a regular basis (proper lubrication, oil, gas, battery, spark plugs, exhaust, hoses, leak checks, and so on), keep individual boat maintenance logbooks (at the laboratory) and checklists (on board), store and cover boats properly when not in use, and designate a person or personnel to maintain small boats.
2	Sign out small boats.	Personnel leaving port without proper boat equipment	Establish standard boat checkout procedures, checklists, and "Go Kits".
2		Low on fuel	Ensure that enough fuel is on board for the length of the trip, plus extra for emergencies.
2		Improper fueling	Know the correct type of fuel and oil used for different motors and know how to properly mix fuels.

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JOB HAZARD ANALYSIS

FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**James D. Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Marine Salmon Interactions**	SUPERVISOR:	**Bill Heard**	FREQUENCY:	**8 hrs./day approx. 7days in duration**
JOB TITLE:	**Large Boat Operations**	APPROVED BY:		JHA NUMBER:	**JF-14**
TASK:	**JF-14**	JOB PERFORMED BY:	**Joe Orsi**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Floatation vests or jackets, hard hats, slip- and water-resistant boots
GENERAL NOTES: Location: Sea, pier, large boat work on the John N. Cobb

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Plan for potential emergencies at sea.	Emergency equipment not on board or does not work	Run through a checklist or emergency equipment required for each vessel type and ensure that emergency equipment is in working order and good condition.
1		Personnel unfamiliar with potential emergencies at sea	Hold a safety orientation to review emergency procedures and drills during every cruise or weekly (calling for help on radio, falling overboard, running aground, and so on); safety orientations also include reviewing the use of emergency and safety equipment and their location (including but not limited to survival kits, personal floatation devices, flares, first aid kit, locator beacon or transmitter, or life raft). Attend regular (yearly) vessel safety training by an accredited or approved safety training organization.
1		Falling overboard and drowning	Hold "man overboard" drills weekly or on each new cruise and know the locations of emergency floatation rings, lights, and lines. Recommended training includes first aid, CPR, and U.S. FWS safety course.

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FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**Jim Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Marine Salmon Interactions**	SUPERVISOR:	**Bill Heard**	FREQUENCY:	**24 hrs**
JOB TITLE:	**Biologist**	APPROVED BY:		JHA NUMBER:	**JF-15**
TASK:	**JF-15**	JOB PERFORMED BY:	**John Joyce**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: None
GENERAL NOTES: Field work, location: Little Port Walter (LPW). Equipment improvements: cellular telephone repeater station to increase communication between LPW and field crews.

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Live at LPW.	Animal bite (bears)	Make loud noises to scare off wild animals, use nonlethal rubber bullets, and use National Rifle Association (NRA) safety tips, as appropriate.
2	Count salmon in streams.	Animal bites (bears)	Make loud noises to scare off wild animals (use rubber bullets or cracker shells), adversive conditioning training; do not leave out food or wastes, keep the animals away from the Bay area. Firearms are required in bear areas. Be knowledgeable, careful, and maintain guns, and take a safety course annually for safe gun handling and target practice (modeled after the Forest Service).
3	Transport hazardous materials to and from LPW by airplane.	Exposure to incinerator waste, chemical waste, and cleaning chemicals (methlene chloride)	Use Department of Transportation regulations for packing, shipping, and labeling and inform carriers of the hazardous waste status.

* = Recommended

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FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**Jim Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Marine Salmon Interactions**	SUPERVISOR:	**Bill Heard**	FREQUENCY:	**24 hrs**
JOB TITLE:	**Biologist**	APPROVED BY:		JHA NUMBER:	**JF-15**
TASK:	**JF-15**	JOB PERFORMED BY:	**John Joyce**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: None
GENERAL NOTES: Field work, location: Little Port Walter (LPW). Equipment improvements: cellular telephone repeater station to increase communication between LPW and field crews.

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Live at LPW.	Animal bite (bears)	Make loud noises to scare off wild animals, use nonlethal rubber bullets, and use National Rifle Association (NRA) safety tips, as appropriate.
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FACILITY:	**Auke Bay Laboratory**	ANALYSIS BY:	**Jim Romine, TtEMI**	DATE:	**2001-07-10**
DEPARTMENT:	**Habitat**	SUPERVISOR:	**Jeep Rice**	FREQUENCY:	**1-2 times/week**
JOB TITLE:	**Sample Extraction**	APPROVED BY:		JHA NUMBER:	**JF-16**
TASK:	**JF-16**	JOB PERFORMED BY:	**Josie Lunasin**		

REQUIRED PERSONAL PROTECTIVE EQUIPMENT: Safety glasses and nitrile gloves
GENERAL NOTES: Manual sample extraction and separation of alkanes from alkenes

JOB HAZARD ANALYSIS:

Step	Description	Hazard	Controls
1	Add methylene chloride to extractions.	Exposure to methylene chloride	Use a fume hood and set the sash in the correct position, install a window in the fume hood above the sash, so that workers can observe, and provide an elevated surface so that the top of the extraction column is at eye level to the worker.
2	Extract samples.	Exposure to methylene chloride	Continue to use a fume hood and set the sash in the correct position.
3	Concentrate samples.	Exposure to methylene chloride	Continue to use a fume hood and set the sash in the correct position.

* = Recommended

Approval Signature:	Date: